

Catalogue of American Amphibians and Reptiles.

AUFFENBERG, WALTER, AND RICHARD FRANZ. 1978. *Gopherus agassizii*.

***Gopherus agassizii* (Cooper)**
Desert tortoise

Xerobates agassizii Cooper, 1863:120. Type-locality, "mountains of California, near Fort Mojave." Type and collector not stated, although Cochran (1961:236) listed as cotype, U.S. Nat. Mus. 7888, "juv. Utah Basin, Mojave River (catalog carries 'Solado Valley, California')", J. G. Cooper, March, 1861." The remaining two syntypes, originally deposited in the California State Geological Survey, have not been located. If sent to the California Academy of Sciences, they would have been destroyed in the earthquake and fire of 1906.

Testudo agassizii: Cope, 1875:54.

Gopherus agassizii: Stejneger, 1893:161.

Gopherus polyphemus agassizii: Mertens and Wermuth, 1955:371. See remarks in Auffenberg and Franz (1978).

- **CONTENT.** No subspecies are recognized.

- **DEFINITION.** Adults are 215–350 mm in carapace length, with a low, oval shell, moderately flat dorsally and usually flared along the lateroposterior border; gular projections are broadly acute and often deeply notched anteriorly at the midline. Ossicles of the forelimbs are moderate in size, flat to obviously keeled, and never fused. The antibrachial scales are moderately imbricate (more so in juveniles). The axillary scale is trapezoidal. The head may be 85–115% of hind foot width. The skin color is yellowish-gray in juveniles to gray, brownish-gray, or black in adults. Shell ground color is yellowish-brown to black (sometimes mottled in very old specimens) and often with yellowish areolae, particularly in the young. Marginals are not distinctly lighter than costal scutes. Females tend to be smaller than males, with less concave plastron, shorter gular projections, and short blunt tails terminating at the level of the cloaca.

- **DESCRIPTION.** Woodbury and Hardy (1948), Carr (1952), Grant (1960b), and Ernst and Barbour (1972) provide general descriptions. Anatomical information presented in Woodbury and Hardy (1948) and Auffenberg (1966); os transiliens by Legler (1962), Patterson (1973b), and Bramble (1974); cervical vertebrae by Williams (1950). Young and hatchlings are described by Miller (1932), Woodbury and Hardy (1948), and Grant (1960a); eggs by Camp (1921), Miller (1932), Grant (1936), and Woodbury and Hardy (1948); mental glands secretions, Rose et al. (1969); DNA content, Atkin et al. (1965).

- **ILLUSTRATIONS.** Adults are illustrated in Woodbury and Hardy (1948), Carr (1952), Switak (1973), and many others. Young and hatchlings are shown in Miller (1932, 1955) and Woodbury and Hardy (1948).

- **DISTRIBUTION.** *Gopherus agassizii* occurs in southern Utah, southern Nevada, western Arizona, southeastern California (Luckenbach, 1976; Patterson, 1976a), most of Sonora (including Tiburon Island, Gulf of California) to northwestern Sinaloa, Mexico. Smith and Taylor (1950) mentioned the presence of this tortoise in northwestern Baja California, but we are unaware of any specimens from this area.

- **FOSSIL RECORD.** *G. agassizii* is known from the Pleistocene of California (Miller, 1942; Brattstrom, 1954, 1958), New Mexico (Brattstrom, 1964; Van Devender et al., 1976), and the post-Pleistocene of Nevada (Brattstrom, 1954). Only the New Mexico localities are significantly outside the present range of *G. agassizii*.

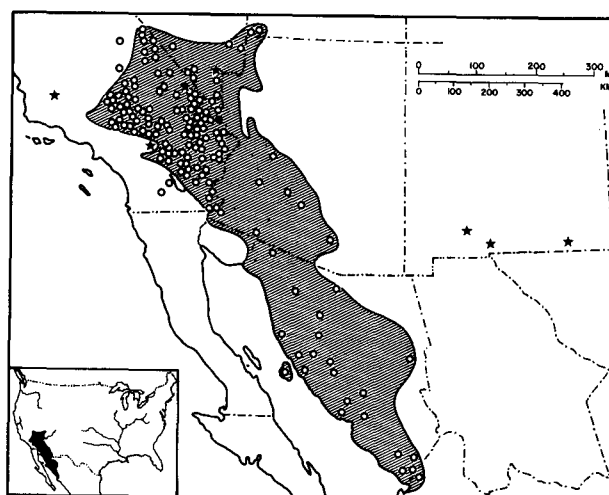
- **PERTINENT LITERATURE.** Douglass (1975, 1977) provides extensive bibliographies on *G. agassizii* and other *Gopherus*. General accounts, including description and life history information, are in Carr (1952), Ernst and Barbour (1972), and others; breeding and egg laying are described by Woodbury and Hardy (1948), Householder (1950), Woodbury (1952), Stuart (1954), Booth (1958), Lee (1963), and Tomko (1972); growth by Bogert (1937), Miller (1955), Patterson and Brattstrom (1972), and Medica et al. (1975); ecology and habits by Woodbury and Hardy (1940, 1948), Grant (1946), Nichols (1953, 1957), Burge and Bradley (1976), Berry

(1976), and Schwartzmann and Ohmart (1976); aggregations and dispersal behavior in captives by Patterson (1971b); lung volume and buoyancy by Patterson (1973a); vocalization by Campbell and Evans (1967) and Patterson (1976b); righting behavior by Ashe (1970); food by Woodbury and Hardy (1948), Grant (1960a), and Hansen et al. (1976); urination as egg predator defense by Patterson (1971a); excretion by Dantzler and Schmidt-Nielsen (1966) and Minnich (1972); shell abnormalities by Grant (1936); parasites by Harbison (1937), Woodbury and Hardy (1948), and Ryckman and Kohls (1962); respiratory disease by Fowler (1976); thermal characteristics by Brattstrom (1965), Hutchison et al. (1966), McGinnis and Voigt (1971), and Voigt (1975); burrow and shelter utilization by Woodbury and Hardy (1948); serology by Frair (1964); hemoglobin characteristics by Sullivan and Riggs (1967a, 1967b, 1967c); DNA content by Atkin et al. (1965); cutaneous water loss by Schmidt-Nielsen and Bentley (1966).

- **ETYMOLOGY.** The name *agassizii* honors Louis Agassiz, a mid-19th Century American herpetologist whose work on American turtles according to Cooper (1863:121), "leaves nothing to be desired."

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MAP. Solid circle indicates the type-locality, open circles mark other localities; stars indicate Pleistocene and (Nevada) post-Pleistocene fossils.

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